

REMARKS

The only issue outstanding in the office action mailed October 16, 2006, are the rejections under 35 U.S.C. §§102 and 103. Reconsideration of these issues, in view of the following discussion, is respectfully requested.

Rejection under 35 U.S.C. §102

Claim 14 has been rejected under 35 U.S.C. §102(b) over Keim '601. It is submitted that this rejection is moot, in view of the amendment of claim 14 to recite that the catalysts employed are heterogeneous fixed bed catalysts, as in claim 13. Withdrawal of the rejection is therefore respectfully requested.

Rejection under 35 U.S.C. §103

Claims 2-13 have been rejected under 35 U.S.C. §103 over Brunner et al. (WO'339), equivalent to US patent 6,960,673. Reconsideration of this rejection is also respectfully requested. Although not specifically mentioned in the statement of the rejection, page 3 of the office action also appears to rely on Gutche et al. (US patent 6,245,727). Accordingly, the rejection being treated as one over Brunner taken with Gutche.

Brunner discloses to a method for pretreating crude oils and raw fats for the production of fatty acid esters by transesterification of oils and fats. The crude oils containing free fatty acid and slimy substances are treated with a mixture containing an alcohol and concentrated acid. Thus, the slimy substances swell, are not longer oil soluble and can be subsequently separated. See claim 1. The treated oil is then washed with an alkaline glycerol phase loaded with soaps of the free acids, and the slimy substance is separated as heavy phase from the neutral oil. The deslimed neutral oil is transesterified with an alkaline catalyst adding methanol. See claim 2.

As admitted at page 3 of the office action, Brunner discloses only a homogeneous catalysis process. Moreover, the transesterification of vegetable or animal oils is not performed simultaneously with the esterification of the free acidity of the oils.

Gutsche describes a discontinuous process for conducting a heterogeneously catalyzed reaction. (See the abstract.) The problem addressed in this invention is to limit the losses of catalyst and product. This process can be used for esterification or transesterification reactions. See col. 1, lines 25-37. However, it is not specified that the process could be used for vegetable or animal having a natural free acidity, which, as is generally known, disrupts the transesterification reaction.

Thus, combining these two documents, it is not obvious to one skilled in the art to transesterify acid oils from vegetable or animal origin by heterogeneous catalysis. None of the documents suggests the reduction of the free acidity simultaneously to the transesterification of the oils, which allows the presently claimed process to proceed.

Moreover, with respect to new independent claim 15, the combination of references fails to suggest conducting these two reactions simultaneously with a catalyst comprising a zinc aluminate, as admitted in the office action at page 3 for Brunner. Gutsche fails also to disclose such a catalyst, much less use as claimed.

Accordingly, withdrawal of the rejection is respectfully requested.

The claims in the application are submitted to be in condition for allowance, and passage to issue is respectfully requested. If the examiner has any questions or comments, he is cordially invited to telephone the undersigned at the number below.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,

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